

Changed Claims pursuant to Article 19 PCT

[received by the International Bureau on 13 April 2004 (13.04.2004);
original claims 1 to 10 replaced by new claims 1 to 9 (3 pages)]

1. Spout seal for combipacks consisting of a bottom part (2), which is intended to be fused onto a combipack with its level bottom side, and has a circular, upward-projecting overhang (11) to form a pouring spout (5), with the overhang's inside being open, as well as of a lid (1) molded onto this bottom part (2) for swiveling upwards via a hinge (27) and downwards onto the bottom part (2) for sealing. The lid (1) forms a mold (21) bulging upwards when open, which forms a level upper surface, which form-fits into the clearance opening (9) in the bottom side of the bottom part (2) surrounded by the projecting lip (11) when the lid (1) is closed and is flush with this bottom side or projects downward from it by up to 0.5 mm, *characterized in* that the lid (1) is connected via a film hinge (27) to an L-shaped, moving-along swivel elbow (19) via which it is connected to the bottom part (2) via an additional film hinge, whereby the leg of the swivel elbow (19) facing the bottom part (2) can be fused with the disk (3) forming the bottom side of the bottom part (2) when swiveled shut for the first time, whereby the edge of the other leg forms the swivel axis (27) for swiveling the lid (1) onto/off the bottom part (2).
2. Spout seal for combipacks according to one of the above claims *characterized in that* at least one L-shaped wing (24) with breaking points (36) is molded to the bottom side of the lid (1), whose free leg (25) can be fused with the disk (3) forming the bottom side of the bottom part (2).
3. Spout seal for combipacks according to one of the above claims *characterized in that* one elastic latch (26) each is formed to the bottom part of the lid (1) on both sides of its swivel hinge (27), with the latch running along the bottom side of the lid (1) towards the bottom part (2) of the seal,

and that one cam (13) each with a semi-cylindrical top end (14) is formed onto the top side of the disk (3) forming the bottom side of the bottom part (2), whereby the cam projects in vertical direction from the disk, and whereby the tips of the latches (26) glide over the semi-cylindrical top ends (14) of the cams (13) under elastic deformation due to the swivel geometry.

4. Spout seal for combipacks according to one of the above claims *characterized in that* the overhang (11) at the bottom part (2) initially rises in height, starting from the hinge side, and has a constant height in the section (8) of the pouring spout (5), whereby the wall (6) of the overhang (11) runs, on the front side, at an oblique angle to the disk (3), thereby forming a pouring spout (5), which projects from the front side (34) of the disk (3) towards the front, whereby the overhang (11) includes an acute angle on the outside with its top lip (4), and that the bulge (21) has such a height and shape that its top side runs parallel to the bottom side of the bottom part (2) when closed.
5. Spout seal for combipacks according to one of the above claims *characterized in that* a collar (33) is formed onto the side wall of the bulge (21) near its top edge and running parallel to the same, and that a collar (32) is formed on the inside of the overhang (11) on the bottom part (2) and parallel to its edge running alongside the disk (3), whereby the collar (33) on the lid (1) snaps shut on the bottom part (2) behind the collar (32) at its overhang (11) when closing the lid (1).
6. Spout seal for combipacks according to one of the above claims *characterized in that* a grip latch (22) is formed on the lid (1) in front of the tub-shaped bulge (21), which is connected with the outside of the bulge (21) via a triangular rib (23) that runs in rectangular direction to the grip latch.
7. Spout seal for combipacks according to one of the above claims *characterized in that* the lip of the opening (9) is fitted with sharp teeth (39) projecting downward.

8. Spout seal for combipacks according to one of the above claims *characterized in that* there are notches (12;15) at the top side of the disk (3) of the bottom part (2) for the exact uptake of the leg of the L-shaped swivel elbow (19) facing the bottom part (2) on the one hand as well as of the free legs (25) of the wings (24) at the lid (1) on the other hand, and that there are grooves (28) at the outside of the tub-shaped bulge at the lid (1) for fusing this outside with the sealing foil of a combipack.
9. Spout seal for combipacks according to one of the above claims *characterized in that* the lid (1) is shaped narrower than the bottom part (2), whereby the free legs (25) of the L-shaped wings (24) protrude the width of the lid (1).

Declaration pursuant to Article 19 PCT

EP 0 658 480 A (TETRA LAVAL HOLDINGS & FINANCE) describes a seal where a small shoulder at the bottom side of the lid lifts an opening strip when the seal is swiveled open. The connection between this shoulder and the open strip then tears off, and the opening strip, which seals the pre-punched hole, can be torn off manually. However, this strip has to be torn off separately and does not tear when the lid is swiveled open. FR 2 738 552 A (RICAL SA) shows a seal with a similar structure, whereby a sealing foil covers its clearance opening. This foil is part of the seal itself and connected to it in one single piece. When the lid is opened, this foil is torn out of the bottom part. Therefore the lid does not tear out a sealing foil on the packaging material itself. PATENT ABSTRACTS OF JAPAN, vol. 1996, no. 09, reveals a similar seal. Contrary to the seals according to this state of the art, the seal described in the present invention can be fused onto a pack and offers a clearly visible initial opening guarantee. In addition, the lid is retained securely in the open position due to its geometry with its L-shaped swivel elbow.